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SECTION 1 INTRODUCTION AND PURPOSE

This Initial Study of environmental impacts is being prepared to conform to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 *et. seq.*), and the regulations and policies of the City of Sunnyvale.

This Initial Study evaluates the potential environmental impacts which might reasonably be anticipated to result from the construction of two bicycle/pedestrian on Borregas Avenue over State Route 237 (SR 237) and Highway 101 (US 101) in the City of Sunnyvale. Each bridge would ramp up along the local street on the opposite side of the freeway, cross perpendicular to the freeway, then ramp down along the local street on the opposite side of the freeway.

SECTION 2 PROJECT INFORMATION

2.1 PROJECT TITLE

Borregas Avenue Bicycle/Pedestrian Bridges

2.2 PROJECT PROPONENT/LEAD AGENCY CONTACT

City of Sunnyvale, Department of Public Works
Dieckmann Cogill, Project Manager
456 West Olive Avenue
PO Box 3707
Sunnyvale, CA 94088-3707
(408) 730-7415

2.3 PROJECT OVERVIEW AND LOCATION

The City of Sunnyvale proposes to construct two bicycle/pedestrian bridges on Borregas Avenue. One bridge would be over State Route 237 and the other would be over Highway 101 (US 101) (refer to Figures 1-3). Each bridge would ramp up along the local street on the opposite side of the freeway, cross perpendicular to the freeway, then ramp down along the local street on the opposite side of the freeway. This type of overcrossing is often referred to as a "U" configuration.

The proposed project consists of two project sites: the northern project site is located at the Borregas Avenue and SR 237 intersection and the southern project site is located at the Borregas Avenue and US 101 intersection (refer to Figure 3).

Figure 1 Regional Map

Figure 2 Vicinity Map

Figure 3 Aerial Map with Surrounding Land Uses

2.4 PROJECT BACKGROUND

The City of Sunnyvale is crisscrossed by a number of physical barriers that make north-south access difficult, particularly across SR 237 and US 101. Access is especially difficult for bicyclists and pedestrians who are often required to use bridges and underpasses that were originally designed for automobile traffic only.

Although commuter cyclists have a choice of several north-south streets that lead from residential areas to employment areas to the north of SR 237, the streets are only recommended for advanced riders because of the speed and intensity of the traffic.

In 1997, the City began a Bicycle Opportunities Study that evaluated the feasibility of installing bicycle lanes throughout the City. The Study included an analysis of existing cross sections and travel volumes on various streets. The analysis indicated that it would not be feasible to install bicycle lanes on Mathilda Avenue, Wolfe Road, or Fair Oaks Avenue near the SR 237 and US 101 interchanges.

Based on the conclusion of the Bicycle Opportunities Study and recommendation of the Sunnyvale Bicycle and Pedestrian Advisory Committee, the City completed the *Draft Project Feasibility Study for the Borregas Avenue Over-Crossings of US 101 and SR 237* in 1998.

The Feasibility Study analyzed possible overcrossing designs and their impacts to safety, street operations and utilities, and local access. The study also looked at bridge function and usability, visual impacts, and cost. The Study recommended the u-configuration design at each project site with the bridge structures located next to the soundwalls or fences between the frontage roads and freeways.[1]

2.5 PROJECT PURPOSE

The purpose of the proposed project is to provide safe and convenient bicyclists and pedestrian movement between north and central Sunnyvale. The proposed project would increase the safety for bicyclists and pedestrians by providing a safer alternative to Mathilda Avenue and Fair Oaks Avenue corridors, which have high traffic volumes, high speeds, and no designated bicycle lanes. The proposed project would serve to enhance the convenience of bicyclists and pedestrians by providing a connection between residential areas, transit terminals, major employment areas, recreational facilities, and trails.

1 Draft Project Feasibility Study Borregas Avenue Bicycle Over-Crossings of US 101 and SR 237. 1 September 1998.

2.6 DETAILED PROJECT DESCRIPTION

The project consists of two bicycle/pedestrian bridges on Borregas Avenue, one over SR 237 and the other over US 101. Each bridge would ramp up along the local street on the opposite side of the freeway, cross perpendicular to the freeway, then ramp down along the local street on the opposite side of the freeway. The project would also require the removal of a total of 39 on-street parking spaces along Persian Drive, Weddell Drive, and Ahwanee Avenue.

The primary components of the project are described below.

Bridge over SR 237

The bridge proposed over SR 237 would be U-shaped and approximately 757 feet (230.7 meters) in length [287 foot (87.5 meter) ramps and a 183 foot (55.8 meter) freeway crossing] and have an overall width of approximately 10 feet (three meters). The bridge would be supported on seven piers, each with a diameter of approximately four feet. Three of the piers would be on the north side of SR 237 in the Moffett Park Drive right-of-way, another pier would be in the median of the freeway, and the remaining three piers would be on the south side of SR 237 in the Persian Drive right-of-way (refer to Figure 4). The south side piers would be adjacent to the existing freeway soundwall, but would not require the relocation of it.

The piers would be driven to a depth of approximately 80 feet (24.4 meters) below the ground surface. Excavation at the two bridge abutments would extend to a depth of approximately three and one-half (3.5) feet (1.1 meters).

All work would occur within the existing public freeway right-of-way, which is owned by the City of Sunnyvale (Borregas Avenue, Moffett Park Drive, and Persian Drive) and Caltrans (SR 237). The bridge ramps would lie within the City of Sunnyvale right-of-way and there will be a center pier that would lie within the Caltrans right-of-way. No purchase of additional right-of-way or temporary construction easements (TCEs) would be required.

Bridge over US 101

The bridge proposed over US 101 would also be U-shaped. This bridge would be approximately 767 feet (233.8 meters) in length [287 foot (87.5 meter) ramps and a 193 foot (58.8 meter) freeway crossing] and have an overall width of 10 feet. The structure would be supported on seven piers, each with a diameter of approximately four feet. Three piers would be on the north side of US 101 in the Weddell Drive right-of-way, another pier would be in the median of the freeway, and the remaining three piers would be on the south side of US 101 in the Ahwanhee Drive right-of-way (refer to Figure 5). The south side piers would be adjacent to the existing freeway soundwall but would not require the relocation of it.

The piers would be driven to a depth of approximately 80 feet (24.4 meters) below the ground surface. Excavation at the two bridge abutments would extend to a depth of approximately three and one-half (3.5) feet (1.1 meters).

All work would occur within the existing freeway right-of-way, which is owned by the City of Sunnyvale (Borregas Avenue, Weddell Drive, and Ahwanhee Drive) and Caltrans (US 101). The bridge ramps would lie within the City of Sunnyvale right-of-way and there will be a center pier that would lie within the Caltrans right-of-way. No purchase of additional right-of-way or TCEs would be required.

The project also proposes a three-way stop, crosswalks, and signage at the Ahwanhee Avenue and Borregas Avenue intersection.

Relocation of Utilities

Borregas Avenue is a major utility corridor. Underground utilities within the Borregas Avenue right-of-way include sanitary sewers, storm drains, gas lines, water lines, and fiber optic cable. The depth of these utilities ranges from several feet to over 30 feet below ground surface.

Information on which of the existing underground utilities, if any, would need to be relocated to accommodate the project is currently being investigated. Any such relocation, however, would be confined to the existing street right-of-way where previous ground disturbance has occurred. The overhead electrical and telephone lines at Weddell Drive (US 101 structure) and Moffett Park Drive (I-237 structure) would need to be relocated.

2.7 PROJECT SCHEDULE AND FUNDING

Construction of the proposed project is presently scheduled to commence in November 2006. Completion is anticipated in February 2008.

Funding sources include the Transportation Equity Act for the 21st Century (TEA-21), which consists of three major programs: Surface Transportation Program (STP), Transportation Enhancement Activities (TEA), and Congestion Management and Air Quality Improvements (CMAQ).

Figure 4 Conceptual Site Plan of Bicycle/Pedestrian Bridge Over SR 237

Figure 5 Conceptual Site Plan of Bicycle/Pedestrian Bridge Over US 101

SECTION 3 ENVIRONMENTAL CHECKLIST AND DISCUSSION OF IMPACTS

This section describes the existing environmental conditions on and near the project area, as well as environmental impacts associated with the proposed project. The environmental checklist, as recommended in the California Environmental Quality Act (CEQA) Guidelines, identifies environmental impacts that could occur if the proposed project is implemented.

The right-hand column in the checklist lists the source(s) for the answer to each question. The sources cited are identified at the end of this section. Where appropriate, this section includes an explanation for those adverse impacts determined to be less than significant.

3.1 AESTHETICS

The following discussion is based upon a visual impact assessment completed by *T.Y. Lin, International* in August 2005. The purpose of the visual impact assessment is to assess the visual impacts of the proposed project and identify measures to mitigate adverse visual impacts associated with the proposed project. A complete copy of this report is included as Appendix A in this Initial Study.

3.1.1 Setting

The visual character of the project area is urban, consisting of typical urban roadways, freeways, and industrial, office, commercial, and residential developments. Landscaped medians along SR 237 and US 101 soften some views of these freeways, and an ivy-covered soundwall is present along SR 237, shielding views of the freeway from surrounding developments. Some large trees are present between developed areas and the freeways.

SR 237 and US 101 are not designated as state scenic freeways. No scenic vistas are visible from the project area and there are no scenic resources in or adjacent to the project area.

3.1.2 Environmental Checklist and Discussion

AESTHETICS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	☐	1
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐	☐	1
3) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐	☐	1,3
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐	☐	1,3

Discussion: The assessment of a project's visual impact is dependent upon an evaluation of the size, character, and design of the proposed development, and the degree to which the project is visually compatible with the surrounding community.

The project proposes to construct two bicycle/pedestrian bridges on Borregas Avenue over SR 237 and US 101. Each bridge would ramp up along the local street on the opposite side of the freeway, cross perpendicular to the freeway, then ramp down along the local street on the opposite side of the freeway (refer to Figures 4 and 5). The proposed bridges would have an average height of 13.8 feet above the existing ground and be up to 22.5 feet at the highest point.

Lighting fixtures would be located along the sides of the fences of the proposed bridges. The lighting fixtures would be designed to focus light on the bridge paths. The fixtures would be designed to prevent any spillover effects on adjacent areas (i.e., lighting of the freeways and nearby residential areas would not occur).[2] Therefore, significant impacts relating to lighting are not expected.

Crash protection, including concrete barriers and metal beam guardrails, is also proposed to protect both the structure and the bicyclists and pedestrians.

2 T.Y. Lin, International. Borregas Avenue Pedestrian Overcrossing Over US 101 and SR 237 in the City of Sunnyvale, Visual Impact Assessment. August 2005.

Evaluation Criteria and Methodology

Visual Quality

For this project, visual quality was evaluated by identifying the vividness, intactness, and unity present in the viewshed.[3] These three criteria for evaluating visual quality are defined below and ranked according to a scale presented in Table 1.

Vividness – the visual power or memorability of landscape components as they combine in distinctive visual patterns.

Intactness – the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be presented in well-kept urban and rural landscapes, as well as in natural settings.

Unity – the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual components in the landscape.

Table 1
Visual Quality Evaluation Scale

Vividness, Unity, and Intactness	Manmade Development*	Encroachments/ Undesireable Eyesores
7 Very High	None	None
6 High	Little	Few
5 Moderately High	Some	Some
4 Average	Average	Average
3 Moderately Low	Moderately High Amount	Several
2 Low	High Amount	Many
1 Very Low	Very High Amount	Very Many

Notes:
** Typically, the more manmade development and/or encroachments present, the lower the vividness, unity, and intactness of the viewpoint.*
Source: FHWA, 1981.

The Federal Highway Administration (FHWA) states that visual quality evaluations should correlate with viewer response to visual quality.

Viewer Response

Methods of Predicting Viewer Response

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by a freeway project.

Viewer sensitivity is defined both as the viewers' concern for scenic quality and the viewers' response to change in the visual resources that make up the view. Local values and goals may confer visual significance on landscape components and areas that would otherwise

3 A viewshed is comprised of all the surface areas visible form an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views located form the proposed project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by project features.

appear unexceptional in a visual resource analysis. Even when the existing appearance of a project site is uninspiring, a community may still object to projects that fall short of its visual goals.

Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, the duration of their view, the speed at which the viewer moves, and the position of the viewer. High viewer exposure heightens the importance of early consideration of design, art, and architecture and their roles in managing the visual resource effects of a project.

Existing Viewer Sensitivity and Exposure

Residential areas exist within the project area to the south of both SR 237 and US 101. The back and front yards of some of these apartments, mobile homes, and single-family residences represent areas of frequent human use where long-duration viewing of the project area can occur. Viewer sensitivity within these areas, therefore, is moderately high.

During scoping for the proposed project, these residents expressed a desire to minimize aesthetic impacts, including minimizing impacts to the existing skyline, creating aesthetically pleasing structures, including landscaping around the over crossings, and inhibiting views of residential areas from the structures. Viewers from commercial and industrial areas adjacent to the project, motorists on SR 237 and US 101, and local street users (i.e., pedestrians and bicyclists) are exposed for shorter durations to views of the project area. Viewer sensitivity within these areas, therefore, is low.

Visual Quality Evaluation

For the proposed project, a Visual Quality Evaluation (VQE) was completed from key viewpoints in order to assess the magnitude of the visual changes resulting from the proposed project and to predict viewer response to that change. The VQE determines the visual resource change from existing to proposed project conditions.

The first step in determining visual resource change is to assess the visual character of the existing site. The second step is to compare the visual quality of the existing site with project visual quality after the project is constructed. The viewer response to project changes is affected by view exposure and viewer sensitivity to the project. The magnitude of visual impact is determined by combining the severity of resource change with the degree to which people are likely to oppose the change.

Photo simulations were prepared at representative viewpoint locations illustrating the likely appearance of each view after project construction. VQE ratings were assigned to each of these “proposed” views. The difference, if any, between the existing and proposed conditions resulting from the proposed project was determined in conducting the VQE. This difference was compared to the expected sensitivities of potential viewer groups to determine a level of visual impact.

Key Viewpoints and Impacts

Because it is not feasible to analyze all the views in which the proposed project would be seen, a select a number of key viewpoints were chosen that would most clearly display the visual effects of the project. Key viewpoints represent the primary viewer groups that would be affected by the project. Key viewpoints were specifically chosen based on anticipated viewer sensitivity, view access, and viewing duration (see Figure 6 for the locations of the key viewpoints).

Photographs were taken from the key viewpoints and these images were used to quantify potential project visibility and to assess related impacts (see Figures 7-11). Each viewpoint and visual quality evaluation is described in Table 2.

Overall Visual Impacts

The FHWA offers the following rating for overall impacts to visual resources (FHWA, 1981):

Low – minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation.

Moderate – moderate adverse change to the visual resource with moderate viewer response. Impacts can be mitigated within five years using conventional practices.

Moderately High – moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than five years to mitigate.

High – a high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high.

Overall, the existing conditions of the project area are considered have moderately low to low visual quality and the proposed project would reduce the visual quality somewhat. Views from residential areas would be the primary views impacted and the quality of those views would be diminished by the presence of the proposed bridges through the reduction of views of the skyscape.

Because the existing visual quality within the project area is relatively low, the rating for the overall impact to visual resources resulting from the proposed project would be low (refer to Table 2).

Table 2
Key Viewpoint 1 (refer to Figure 7) and Visual Quality Evaluation

	Existing Conditions	Post-Project Conditions
	Key Viewpoint 1 looks from the bridge proposed over SR 237 towards the residential area to the south of the proposed bridge (refer to Figure 6). The existing view from this location includes overhead utilities, residential yards and rooftops, the soundwall adjacent to SR 237, trees, shrubs, and other vegetation. Because there is no bridge or other structure currently in place, the view from Key Viewpoint 1 is presented for illustrative purposes only.	As part of the project, views of residential areas would be shielded from the proposed bridge by the use of tight mesh. The tight mesh would provide privacy for residents within the vicinity of the project.
Vividness	*Moderately low* - The landscape components of the existing view from Key Viewpoint 1 (looking from the proposed bridge towards the residential area to the south of the proposed bridge over SR 237) form a view of average memorability (refer to Existing View in Figure 7). Views of rooftops, trees, and distant mountains form a visual pattern typical of the area. Water features are not present. The vegetation in the view, however, creates varied pattern of texture and color and the manmade development in the view is regular and contrasts with the distant mountain view.	*Low* - Views of the sky, vegetation, and mountains would sky would diminish, resulting in a reduction in vividness of the view.
Intactness	*Moderately low* - contains some visually encroaching features, including overhead utilities. The resulting visual pattern is of average integrity, appearing somewhat interrupted.	*Low* - Views would be interrupted all along the proposed bridge, resulting in a reduction in the intactness and unity of this view.
Unity	*Moderately low* – a strong relationship between manmade and natural features is not present from this viewpoint and the visual pattern is somewhat harmonious.	
Overall Visual Quality	***Moderately low*** – approximately a 3 on the FHWA evaluation scale presented in Table 1.	***Low*** - approximately a 2 on the FHWA evaluation scale presented in Table 1. While this would result in a reduction in the existing visual quality at Key Viewpoint 1, the magnitude of this change would not be great, given the existing moderately low visual quality of the area.

Source: Visual Impact Assessment, Borregas Avenue Pedestrian Overcrossing Over US 101 and SR 237 in the City of Sunnyvale. August 2005.

Figure 7 Key Viewpoint 1

Table 3
Key Viewpoint 2 (refer to Figure 8) and Visual Quality Evaluation

	Existing Conditions	Post-Project Conditions
	This key viewpoint looks north towards SR 237 from the residential area to the south of the bridge proposed over SR 237 (refer to Figure 6). The existing view from this location includes overhead utilities, residential yards and rooftops, trees, the vegetated soundwall adjacent to SR 237, and rooftops of the commercial development across the freeway.	
Vividness	*Low* - The landscape components of the existing view from Key Viewpoint 2 (looking north towards SR 237 from the residential area to the south of the proposed bridge) do not form a view of strong memorability. Striking and distinctive visual patterns and water features are not present. The vegetation in the view is relatively sparse and the manmade development in the view is of low memorability.	*Low* - The vividness, or memorability, of the view is not expected to change substantially as a result of the project.
Intactness	*Low* - Key Viewpoint 2 contains some visually encroaching features, including overhead utilities and the commercial area across the freeway, and the resulting visual pattern is of relatively low integrity, appearing interrupted and irregular.	*Low* - The proposed project would become a prominent visual feature from this Key Viewpoint and would interrupt the existing view, leading to a reduction in the viewpoint's intactness and unity.
Unity	*Low* - A strong relationship between manmade and natural features is not present from this viewpoint, and there is no coherent, harmonious visual pattern.	
Overall Visual Quality	***Low*** **-** approximately a 2 on the FHWA evaluation scale presented in Table 1.	***Low*** **-** approximately a 2 on the FHWA evaluation scale presented in Table 1. The magnitude of the change in the visual environment at Key Viewpoint 2 is not expected to be great, given the existing low visual quality of the area.

Source: Visual Impact Assessment, Borregas Avenue Pedestrian Overcrossing Over US 101 and SR 237 in the City of Sunnyvale. August 2005.

Figure 8 Key Viewpoint 2

Table 4
Key Viewpoint 3 (refer to Figure 9) and Visual Quality Evaluation

	Existing Conditions	Post-Project Conditions
	This key viewpoint looks east along Bradford Drive towards the bridge proposed over SR 237 (refer to Figure 9). The existing view from this location includes overhead utilities, roadways, residences, trees, shrubs, other vegetation, and the soundwall adjacent to SR 237.	The proposed project would result in a slight increase in overall visual quality at Key Viewpoint 3 (refer to Figure 9).
Vividness	*Low* - The landscape components of the existing view from Key Viewpoint 3 (looking east along Bradford Avenue towards the bridge proposed over SR 237) do not form a view of strong memorability. While the view does contain a relatively large skyscape and mountains can be seen in the distance, striking and distinctive visual patterns and water features are not present. The vegetation in the view is relatively sparse, limited to residential front yards and the vines on the soundwall.	*Low* - The proposed bridge over SR 237 would add visual interest to the soundwall from this viewpoint, resulting in a slight increase in the vividness of the view.
Intactness	*Low* - The resulting visual pattern is of relatively low integrity, appearing interrupted and irregular.	*Low* - From this viewpoint, the proposed bridge would not greatly interrupt views of the skyscape or the mountains. The structure is consistent with the existing view and would not decrease the visual order in the landscape, therefore a reduction in intactness and unity are not expected.
Unity	*Low* - A strong relationship between manmade and natural features is not present from this viewpoint, and there is no coherent, harmonious visual pattern.	
Overall Visual Quality	***Low*** - approximately a 2 on the FHWA evaluation scale presented in Table 1.	***Low*** - Even though a slight increase in visual quality is expected, the assessment of vividness, intactness, and unity would continue to form an overall rating of low (approximately 2 on the FHWA evaluation scale presented in Table 1). The magnitude of the change in the visual environment at Key Viewpoint 3 is not expected to be great, given the existing low visual quality of the area.

Source: Visual Impact Assessment, Borregas Avenue Pedestrian Overcrossing Over US 101 and SR 237 in the City of Sunnyvale. August 2005.

Figure 9 Key Viewpoint 3

Table 5
Key Viewpoint 4 (refer to Figure 10) and Visual Quality Evaluation

	Existing Conditions	Post-Project Conditions
	This key viewpoint looks east along Ahwanee Avenue towards the proposed bridge over US 101 (refer to Figure 10). The existing view from this location includes overhead utilities, roadways, residences, trees, shrubs, other vegetation, and the soundwall adjacent to US 101.	The proposed project would result in a slight increase in overall visual quality at Key Viewpoint 4 (refer to Figure 11).
Vividness	*Low* - The landscape components of the existing view from Key Viewpoint 4 (looking east along Ahwanee Avenue towards the bridge proposed over US 101) do not form a view of strong memorability. While the view does contain a relatively large skyscape and mountains can be seen in the distance, striking and distinctive visual patterns and water features are not present. The vegetation in the view is relatively sparse, limited to residential front yards. The manmade development in the view is of low memorability.	*Low* - The bridge proposed over US 101 would add visual interest to the soundwall from this viewpoint, resulting in a slight increase in the vividness of the view.
Intactness	*Low* - Key Viewpoint 4 contains some visually encroaching features, such as overhead utilities and the soundwall. The resulting visual pattern is of relatively low integrity, appearing interrupted and irregular.	*Low* - From this viewpoint, the proposed bridge would not greatly interrupt views of the skyscape or the mountains. The structure is consistent with the existing view and would not decrease the visual order in the landscape, therefore a reduction in intactness and unity are not expected.
Unity	*Low* - A strong relationship between manmade and natural features is not present from this viewpoint, and there is no coherent, harmonious visual pattern.	
Overall Visual Quality	***Low*** - approximately a 2 on the FHWA evaluation scale presented in Table 1.	***Low*** - Even though a slight increase in visual quality is expected, the assessment of vividness, intactness, and unity would continue to form an overall rating of low (approximately 2 on the FHWA evaluation scale presented in Table 1). The magnitude of the change in the visual environment at Key Viewpoint 4 is not expected to be great, given the existing moderately low visual quality of the area.

Source: Visual Impact Assessment, Borregas Avenue Pedestrian Overcrossing Over US 101 and SR 237 in the City of Sunnyvale. August 2005.

Figure 10 Key Viewpoint 4

Table 6
Key Viewpoint 5 (refer to Figure 11) and Visual Quality Evaluation

	Existing Conditions	Post-Project Conditions
	This key viewpoint looks north towards US 101 from the residential area to the south of the bridge proposed over US 101 (refer to Figure 11). The existing view from this location includes overhead utilities, residential yards and rooftops, and trees.	The proposed project would result in a decrease in overall visual quality at Key Viewpoint 5 (refer to Figure 11).
Vividness	*Low* - The landscape components of the existing view from Key Viewpoint 5 (looking north towards US 101 from the residential area to the south of the proposed bridge over US 101) do not form a view of strong memorability. While the view does contain a relatively large skyscape, striking and distinctive visual patterns and water features are not present. In addition, the vegetation in the view is relatively sparse and the manmade development in the view is of low memorability.	*Low* - the view of the sky would diminish.
Intactness	*Low* - Key Viewpoint 5 contains some visually encroaching features, including overhead utilities. The resulting visual pattern is of relatively low integrity, appearing interrupted and irregular. The intactness of the view, therefore, is low.	*Low* - The proposed bridge over US 101 would become a prominent visual feature from this Key Viewpoint and would represent further interruption in the view.
Unity	*Low* - A strong relationship between manmade and natural features is not present from this viewpoint and there is no coherent, harmonious visual pattern.	
Overall Visual Quality	***Moderately low*** - approximately a 3 on the FHWA evaluation scale presented in Table 1.	***Low*** - approximately a 2 on the FHWA evaluation scale presented in Table 1. While this would result in a reduction in the existing visual quality at Key Viewpoint 5, the magnitude of this change would not be great, given the existing moderately low visual quality of the area.

Source: Visual Impact Assessment, Borregas Avenue Pedestrian Overcrossing Over US 101 and SR 237 in the City of Sunnyvale. August 2005.

Figure 11 Key Viewpoint 5

Avoidance Measures Aes-1: The project proposes the following measures to further reduce visual and aesthetic impacts:

1. Use tight mesh on bridge fences – mesh of smaller width shall be used on portions of the bridges (e.g., in panels or across the entire south side of the bridges) in order to shield views from the proposed bridges into residential yards and windows.

2. Use less contrasting color – the proposed bridge structures and fences shall be colored light silver, black, or some other color in order to provide less contrast and blend better with surrounding views.

3. Incorporate wall texturing – the walls of the bridge structures shall be covered with a special coating to lessen the likelihood of graffiti covering the walls.

4. Incorporate vegetative screening – vegetative screening and landscaping shall be provided on and around the bridge structures to enhance their aesthetic appeal.

5. Consider decorative arches and other aesthetic enhancements – the City of Sunnyvale shall explore the possibility of incorporating decorative arches and other aesthetic enhancements present on other Caltrans bicycle/pedestrian bridge designs.

Cumulative Impacts

The discussion of cumulative impacts relates to the potential for the proposed project to contribute to an aggregate change in visual quality of the area. In general, the relative scale of this specific project would not detract substantially from the existing quality of the entire visual environment in the City. Because the proposed project would have a relatively small visual impact and implement the above avoidance measures to further reduce impacts, the proposed project would not result in significant cumulative visual impacts.

3.1.3 Conclusion

The proposed project would not result in significant reduction in visual quality. **(Less Than Significant Impact)**

The proposed project would not result in significant cumulative visual or aesthetic impacts. **(Less Than Significant Impact)**

3.2 AGRICULTURAL RESOURCES

3.2.1 Setting

The project area is located within a urban area in Sunnyvale. According to the Santa Clara County Important Farmland 2004 map, the project area is designated as *Urban and Built-Up Land.*

Urban and Built-up Land is defined as residential land with a density of at least six units per 10-acre parcel, as well as land used for industrial and commercial purposes, golf courses, landfills, airports, sewage treatment and water control structures.

Currently, the project site is developed and not used for agricultural purposes. The site is not the subject of a Williamson Act contract. The site is located within an urban area of Sunnyvale, and there is no property used for agricultural purposes adjacent to the project site.

3.2.2 Environmental Checklist and Discussion

AGRICULTURAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	☐	1,2,4
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐	1,2
3) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒	☐	1,4

Discussion: As discussed above, the project site is not designated as farmland or used for agricultural purposes. For these reasons, the proposed project would not result in any impacts to farmland.

3.2.3 Conclusion

The proposed project would not result in impacts to farmland. **(No Impact)**

3.3 AIR QUALITY

3.3.1 Setting

Air quality and the amount of a given pollutant in the atmosphere are determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and for photochemical pollutants, sunshine.

The Bay Area typically has moderate ventilation, frequent inversions that restrict vertical dilution, and terrain that restricts horizontal dilution. These factors give the Bay Area a relatively high atmospheric potential for pollution.

The Bay Area Air Quality Management District (BAAQMD) monitors air quality at several locations within the San Francisco Bay Air Basin. The closest multi-pollutant monitoring site to the project site was located in downtown San José on Fourth Street.[4] Exceedances of air quality standards at the Fourth Street monitoring site during 2001-2003 were due to ozone and particulate matter with a diameter of less than 10 micrometers (PM_{10}) levels above state and federal standards. Violations of the carbon monoxide standards had been recorded at the downtown San José site prior to 1992.

Of the three pollutants known to at time exceed the state and federal standards in the project area, two are regional pollutants. Both ozone and PM_{10} are considered regional pollutants in that concentrations are not determined by proximity to individual sources, but show a relative uniformity over a region. The third pollutant, carbon monoxide, is considered a local pollutant because elevated concentrations are usually only found near the source.

The Federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state, where the federal or state ambient air quality standards are not met, as "nonattainment areas." Because of the differences between the national and state standards, the designation of nonattainment areas is different under the federal and state legislation. Under both the federal Clean Air Act and the California Clean Air Act, the Bay Area is considered in nonattainment for ozone. The Bay Area is also considered in nonattainment for PM_{10} under the California Clean Air Act, but not the federal Act. The Bay Area is considered to be in attainment for all other regulated air pollutants (i.e., nitrogen dioxide, sulfur dioxide, and lead).

4 The San José Fourth Street station was closed for relocation on April 30, 2002. It reopened as San José Central on October 5, 2002

Sensitive Receptors

The BAAQMD defines sensitive receptors as facilities where sensitive population groups (children, the elderly, the acutely ill and the chronically ill) are located. These land uses include residences, school playgrounds, child-care centers, retirement homes, convalescent homes, hospitals and medical clinics. Sensitive receptors near the project site include residences located to the east and west of Borregas Avenue (refer to Figure 3).

3.3.2 Environmental Checklist and Discussion

AIR QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☐	☒	1,5
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐	☐	1,5
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors?	☐	☐	☐	☐	☒	1,5
4) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐	☐	1
5) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒	☐	1

Discussion:

Long-Term Impacts

The project would facilitate non-motorized travel in the City of Sunnyvale by constructing facilities that improve bicycle and pedestrian travel corridors. The new bridges will facilitate bicycle access between the residential areas located in the central and southern parts of Sunnyvale and the industrial areas located in the northern part of Sunnyvale. Future commuting trips made by bicycle instead of automobile will reduce emissions of pollutants.

The promotion of bicycle and pedestrian travel is one of the air quality improvement measures listed in the Clean Air Plan. As noted previously, part of the funding for this project utilizes Congestion Management and Air Quality Improvement (CMAQ) funds.

Based on the above discussion, it is concluded that the proposed project would result in long-term beneficial impacts to air quality.

Short-Term Impacts

The construction of the proposed project could result in air quality impacts. During excavation, grading, and other construction activities, dust would be generated. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed, amount of activity, soil conditions, and meteorological conditions. Nearby land uses, including the residences located to the east and west of Borregas Avenue could be adversely affected by dust generated during construction activities.

Although construction activities would be temporary, they would have the potential to cause both nuisance and health air quality impacts. PM_{10} is the pollutant of greatest concern associated with dust. If uncontrolled, PM_{10} levels downwind of actively disturbed areas could possibly exceed state standards. In addition, dust fall on adjacent properties could be a nuisance. If uncontrolled, dust generated by construction activities could be a significant impact.

Construction activities related to the proposed project could result in significant, short-term air quality impacts. The project would be required to implement the City's standard dust control measures, which are part of Section 35 of the Supplemental General Provisions for all City Construction Contracts. Implementation of these standard measures would reduce impacts related to construction dust to a less than significant level.

3.3.3 Conclusion

The proposed project would result in beneficial long-term air quality impacts. **(Beneficial Impact)**

The proposed project, with the implementation of the City's standard dust control measures, would not result in significant short-term air quality impacts. **(Less Than Significant Impact)**

3.4 BIOLOGICAL RESOURCES

3.4.1 Setting

The project is located in an urbanized area in Sunnyvale. There are no sensitive ecological habitats (e.g., wetlands, creeks, oak woodlands, vernal pools, etc.) within the project sites. The existing vegetation within the project sites include vines along the existing soundwalls.

3.4.2 Environmental Checklist and Discussion

BIOLOGICAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐	1
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐	1
3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	☐	1
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	☐	☐	☐	☒	☐	1

BIOLOGICAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒	☐	1,2,6
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	☐	1,2

Discussion: The project proposes to construct two bridges on Borregas Avenue over SR 237 and US 101. The project sites are within an urbanized area of Sunnyvale. There are no wetlands or other sensitive habitat within, or in the vicinity of, the project sites. Therefore, the presence of special-status plants or animals within the project sites is highly unlikely.

The project sites consist of urbanized habitats. It is not anticipated that the construction of the proposed project would disturb or result in impacts to any trees. For these reasons, the project would not result in significant impacts to biological resources, including sensitive habitats, special-status species, and trees.

3.4.3 Conclusion

The proposed project would not result in impacts to biological resources. **(No Impact)**

3.5 CULTURAL RESOURCES

The following discussion is based upon an archaeological survey report completed by *Basin Research Associates, Inc.* in August 2005. A complete copy of this report is included in Appendix B of this Initial Study.

3.5.1 Setting

The project proposes to construct two bicycle/pedestrian bridges on Borregas Avenue over SR 237 and US 101. The Areas of Potential Effects (APE) for archaeology and architecture are coincident and extend along Borregas Avenue. The APE include all areas where direct or indirect impacts may occur (refer to Figures 6 and 7).

Prehistoric Resources

A literature review was conducted at the Northwest Information Center at Sonoma State University to search for evidence of recorded historic and/or prehistoric archaeological sites in the project area, and any evidence of previous archaeological field inspections of the project area or its surroundings. In addition, the Native American Heritage Commission (NAHC) was contacted for a search of the Sacred Lands Inventory. Letters soliciting additional information were sent to the 12 Native American individuals/groups listed by the NAHC.

No prehistoric or historic sites, or Native American resources have been recorded in or adjacent to the APE. One cultural resource compliance report on file includes a portion of the APE and/or adjacent area for the proposed bridge over US 101. The report was negative for cultural resources in/adjacent to the APE.

The project area is considered to have a low potential for cultural resources. The project area is considered to have a low potential for cultural resources due to the lack of recorded prehistoric and historic era resources in and adjacent to the APE. The nearest recorded archaeological site is located approximately 0.75 miles west and southwest of the APE, near the crossing of SR 237 and US 101 within the southeast corner of Rancho Polsomi.

Historic Resources

Other databases and sources, including the Historic Properties Directory, California History Plan, California Inventory of Historic Resources, Santa Clara County Heritage Resource Inventory, and historic maps, were consulted to determine the presence/absence of historic resources within or adjacent to the project APE.

No City, state, and/or federal historically or architecturally significant structures, landmarks, or points of interest are located in or adjacent to the APE.

3.5.2 Environmental Checklist and Discussion

CULTURAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	☐	☐	☐	☒	☐	7
2) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☒	☐	☐	7
3) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒	☐	7
4) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐	☐	7

Discussion: There are no recorded archaeological sites within or adjacent to the project APE. In addition, no listed, determined or pending local, state, or federal historic properties were located in or adjacent to the project APE. Nonetheless, there is a low potential for construction activities to encounter buried archaeological resources.

Avoidance Measure Cult-1: The project shall implement the following measure to further reduce impacts to cultural resources:

1. In the event of the discovery of unanticipated prehistoric or historic era cultural materials during construction, operations shall stop within 25 feet of the exposure and Caltrans is notified of the find within 24 hours to initiate a review. The find shall be evaluated by a qualified archaeologist, and if the find is significant, treatment recommendations shall be developed.

3.5.3 Conclusion

The proposed project would not result in significant impacts to cultural resources. **(Less Than Significant Impact)**

3.6 GEOLOGY AND SOILS

3.6.1 Setting

Topography and Soils

Sunnyvale lies at the southern end of San Francisco Bay and is built atop the alluvial deposits that surround the margins of the Bay. Sunnyvale's topography is generally flat, dropping from an elevation of 300 feet to sea level. Sunnyvale's soil is largely composed of expansive clays. Expansive clays are a poor foundation material because they swell when wet and shrink when dry, producing extensive cracks. The surface soils on the site consist of Castro clay (Cf), which has a high expansion potential.

Seismicity and Seismic Hazards

The City of Sunnyvale is located within Santa Clara County, which is part of the seismically active San Francisco Bay Area. It is classified as Zone 4, the most seismically active zone in the United States. An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the project site. The degree of shaking is dependent on the magnitude of the event, the distance to its zone of rupture and local geologic conditions.

The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone, nor is it located within a Fault Rupture Hazard Zone as designated by Santa Clara County.[5] Since no known active faults cross the site, fault rupture through the site is not anticipated.

The major fault lines in the region are the San Andreas Fault and the Hayward Fault. The San Andreas Fault is located approximately 12 miles west of the project site and the Hayward Fault zone is located approximately 2.3 miles to the east of the project site. Because of the proximity of the site to these faults, any ground shaking, ground failure, liquefaction, or lateral spreading due to an earthquake could cause damage to structures.

Ground Shaking

Ground shaking is the most widespread effect of an earthquake. The sudden release of energy in an earthquake causes waves to travel through the earth. These waves not only shake structures to the breaking point, but can trigger secondary effects such as landslides or other types of ground failure. Strong ground shaking can be expected at the site during moderate to severe earthquakes in the general region. This is common to all developments in the San Francisco Bay Area.

Given the flat nature of the site, landslide potential on the site is low.

5 County of Santa Clara. Geologic Hazard Zones. Map 11. 26 February 2002.

Ground Failure

Most ground failure from earthquake shaking results in displacement in the surface due to loss of strength of underlying materials. The various types of ground failure include landsliding, liquefaction, lateral spreading, lurching, and differential settlement. These effects usually occur in soft, fine-grained, water-saturated alluvium, as generally found in the Santa Clara Valley.

Due to the type of soils on the site, ground failure potential at the site is low.

Liquefaction

Liquefaction is the result of seismic activity and is characterized as the transformation of loosely water-saturated soils from a solid state to a liquid state after ground shaking. There are many variables that contribute to liquefaction including the age of the soil, soil type, soil cohesion, soil density, and ground water level.

The project area is located within a Santa Clara liquefaction hazard zone.[6]

3.6.2 Environmental Checklist and Discussion

GEOLOGY AND SOILS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
a) Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐	☐	8
b) Strong seismic ground shaking?	☐	☐	☒	☐	☐	1,8
c) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐	☐	1,8
d) Landslides?	☐	☐	☒	☐	☐	1
2) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐	9

6 County of Santa Clara. Geologic Hazard Zones. Map 11. January 2002.

GEOLOGY AND SOILS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
3) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐	☐	1,8
4) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐	☐	9
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	☐	1

Discussion:

Soils

Future development on the site is not expected to be exposed to slope instability, erosion, or landslide-related hazards, due to the flat topography of the site. The project site includes highly expansive soils, which may expand and contract as a result of seasonal or man-made soil moisture conditions. Expansive soil conditions could potentially damage the proposed bicycle/pedestrian bridges, which would represent a significant impact unless substantial damage is avoided by incorporating appropriate engineering into grading and foundation design.

Standard Requirements

The project would be required to be constructed in accordance with the standard engineering practices in the Uniform Building Code, which would ensure that future structures on the site are designed properly to account for the expansive soils on the site.

The presence of expansive soils on the site, therefore, would not represent a significant impact to future development on the site.

Seismicity and Seismic Hazards

As previously discussed, the project site is located in a seismically active region, and therefore, strong ground shaking would be expected during the lifetime of the proposed project. While no active faults are known to cross the project site, ground shaking on the site could damage future buildings and other structures, and threaten the welfare of future patrons and residents. The incorporation of the following standard requirement would reduce and/avoid seismic related hazards.

Standard Requirements

The proposed project would be designed and constructed in conformance with the California Department of Transportation Seismic Design Criteria (SDC) to avoid or minimize potential damage from seismic shaking and seismic-related hazards, including liquefaction, on the site. Potential impacts associated with future exposure to the proposed project, therefore, would be reduced or avoided by conformance with the standards specified in the SDC.

For this reason, the project would not be subject to significant impacts from seismic-related hazards.

The project site at SR 237 is not susceptible to liquefaction. The project site at US 101 and Ahwanee is susceptible to liquefaction.

Impact Geo-1: There is potential for liquefaction to occur on the US 101 site.

Mitigation Measures Geo-1: The project proposes the following measures to reduce impacts related to liquefaction:

1. A detailed design-level geotechnical investigation shall be completed and the project design and construction shall follow the recommendations of the investigation. The design-level investigation shall include subsurface exploration at the site (to address the liquefaction potential at the site) and evaluation of appropriate foundation systems for proposed structures, as well as site preparation and pavement design.

2. Due to the depth of groundwater in the project area, the investigation shall also address any need for dewatering during construction. If dewatering is required, this report shall also identify the amount and depth of dewatering and the specifics regarding disposal of the water.

3.6.3 Conclusion

Development of the proposed project, in conformance with the standard requirements stated above and with the implementation of the recommendations in the design-level geotechnical investigation to be prepared for the project, would not result in significant geological impacts. **(Less Than Significant Impact with Mitigation)**

3.7 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based upon environmental site assessments completed by *Parikh Consultants, Inc.* in August 2005. The purpose of the assessments was to identify and assess potential sources of hazardous materials at the project sites and their potential to impact the project. The analyses also included a regulatory database search for any known or suspected hazardous materials or waste problems on the project sites or in the vicinity of the project sites.

Complete copies of these reports are included in Appendix C of this Initial Study.

3.7.1 Setting

Currently, the project sites generally consist of paved areas and roadways. Based on review of historical information, the surrounding project area was developed with residential and commercial uses from 1940's through present. The properties surrounding the project sites have been used for agricultural uses such as farmland and orchards prior to the 1930s.

Site Reconnaissance

Reconnaissance surveys were completed and involved visual inspection of the project vicinity for problem sites and/or sites with visual contamination. At the northern project site, located at Borregas Avenue and SR 237, three groundwater monitoring wells were observed on West Moffett Park Drive. The monitoring wells may be related to the groundwater plume at the Moffett Navel Air Station. Inspection of nearby areas of the northern project site was completed and no evidence of additional groundwater monitoring wells, soil borings, or other readily visible contamination was observed.

Survey of the southern project site, located at Borregas Avenue and US 101, and nearby area did not find evidence of groundwater monitoring wells, soil borings, or other readily visible site contamination.

Potential On-Site Sources of Contamination

Pesticides and Herbicides

United States Geologic Survey (USGS) maps and aerial photographs indicate agricultural use in the project area prior to the 1930s through 1960s. Therefore, surface soils (top five feet) could be contaminated with pesticides and herbicides now banned by the US Environmental Protection Agency, from past agricultural uses.

Aerial Lead Desposition and Asbestos Containing Materials

The project vicinity includes traffic-bearing roads, including SR 237 and US 101. Historical aerial photographs and maps show that SR 237 and US 101 supported vehicular traffic from the early 1950s. It is highly likely that the surface soils within the project sites are contaminated with aerially deposited lead (ADL) from past use of leaded gas in cars. Lead is a concern because breathing or swallowing lead dust or ingesting lead contaminated soil can cause adverse health effects such as damage to the brain and nervous system, behavior and learning problems, slowed growth, reproductive problems, high blood pressure, and nerve disorders.[7]

The soils in the general project area have the potential to contain naturally occurring asbestos. Asbestos is of concern because exposure to asbestos containing materials (ACMs) has been linked to cancer. ACMs are defined by the federal Environmental Protection Agency as materials containing more than one percent (1%) asbestos.

Potential Off-Site Sources of Contamination

A database search was undertaken for the two project sites for the purpose of identifying sites within one mile of the project sites where there are known or suspected sources of contamination, as well as sites that handle or store hazardous materials. Federal, state, local, historical, and brownfield databases were searched. The databases searched and the results are presented in Appendix C of this Initial Study. The identification of nearby contaminated or hazardous materials sites is important so that potential land use compatibility and public safety impacts can be avoided and/or mitigated.

The following sites were identified in the database search:

Professional Center

The Professional Center is located at adjacent to the south of the northern project site, is listed on the LUST and "Cortese" Hazardous Waste and Substance Sites List (CORTESE) databases. The site is listed for the presence of petroleum hydrocarbons and methyl tertiary butyl ether (MTBE) in site soils and groundwater. More than four groundwater monitoring wells were observed on the property. Groundwater under and downgradient of the Professional Center is impacted with TPH as gasoline and toluene, ethylbenzene, and xylenes. The extent of the groundwater impact has not been determined. It appears that the groundwater downgradient of the Professional Center and Route 237 is impacted with the above mentioned chemicals.

7 US Environmental Protection Agency. Lead in Paint, Dust, and Soil. Last updated: 30 December 2005. Accessed: 17 January 2006. Available at: http://www.epa.gov/lead/pubs/leadinfor.htm.

Wolco Station

The Wolco Station, or Wolco Oil Company, was located at the vacant lot at the southwest corner of Ahwanee and Borregas Avenues. Wolco Station is listed on the LUST and CORTESE databases. This site was listed due to the past presence of six underground storage tanks consisting of gasoline diesel and waste oil tanks, which were installed between 1955 and 1977. The tanks were removed in the early 1980s and soil and groundwater impacts were identified after the tank removals. The site underwent investigation in the 1980s and again in the late 1990s due to possible presence of MTBE. Both times the site was closed after continuous groundwater monitoring.

Residual soil concentration included TPH as gasoline, toluene, xylene, and ethylbenezene. These compounds were also detected in groundwater at the time of closure. Benzene was also found in groundwater.

According to the Santa Clara Valley Water District (SCVWD), there is residual contamination in soil and groundwater at this site that could pose an unacceptable risk under site development activities, such as site grading, excavation, and installation of water wells.

According to the chemical contour maps in the site closure report, shallow groundwater underneath US 101, immediately north of the Wolco site is contaminated, with hydrocarbon product at a monitoring well at the Wolco site. The maps also show a groundwater plume migrating underneath the freeway and entering underneath Weddell Drive and the residential apartment complex north of the freeway.

Other sites

Other sites were identified within one mile of the project sites, but due to the type of incident, status of case, and/or location of the site in relation to the project sites, they do not pose an adverse environmental impact to the proposed project.

3.7.2 Environmental Checklist and Discussion

HAZARDS AND HAZARDOUS MATERIALS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	☐	1

HAZARDS AND HAZARDOUS MATERIALS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	☐	1,10
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☐	1,10
4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐	☐	1,10
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	☐	1
6) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	☐	1
7) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐	1
8) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒	☐	1

Discussion: The project proposes to construct two bicycle/pedestrian bridges on Borregas Avenue over SR 237 and US 101. To provide support for the proposed bridge structures, piles will need to be driven at approximately 80 feet below ground surface.

Potential On-Site Sources of Contamination

Pesticides and Herbicides

Based on the historical agricultural use of the project area, there is potential for surface soils (top five feet) to be contaminated with pesticides and herbicides.

Impact Haz Mat-1: On-site soils could be contaminated with pesticides and herbicides.

Mitigation Measures Haz Mat-1: The project proposes the following mitigation measure to reduce and/or avoid pesticide and herbicide impacts:

1. Complete a Phase II assessment that samples and tests on-site soils and groundwater and characterizes the soil and groundwater for health, safety, and disposal purposes.

2. Ensure that soils and groundwater detected to have hazardous levels of pesticides and/or herbicides are excavated by properly trained personnel and handled in accordance with the state and federal regulations.

Aerial Lead Desposition and Asbestos Containing Materials

It is likely that the surface soils on the project sites are affected by deposition of aerial lead from SR 237, US 101, and local roadways. In addition, the pavement markings at the project sites consist of yellow paint and possibly thermoplastic stripes that may contain lead.

Soils in the project area could contain naturally occurring asbestos. Excavation and soil removal could expose construction workers or residents in the vicinity to harmful levels of asbestos.

Impact Haz Mat-2: Construction of the proposed project could expose construction workers and residents to harmful levels of lead and asbestos.

Mitigation Measures Haz Mat-2: The project proposes the following mitigation measure to reduce or avoid lead and asbestos impacts:

1. Complete a soils test and investigation (Phase 2) for soils that could be disturbed for excavation and removal for lead and naturally occurring asbestos. The investigation shall properly characterize the site risks for construction activities and disposal of impacted soil.

2. The Phase 2 investigation shall be performed by an inspector certified by AHERA under TSCA Title II and certified by Cal OSHA under State of California rules and regulations (California Code of Regulations, Section 1529).

Potential Off-Site Sources of Contamination

Professional Center and Wolco Station

Groundwater underneath the Professional Center site is impacted with total petroleum hydrocarbons as gasoline, toluene, ethylbenzne, and xyelene, due to released from the former underground storage tank. The groundwater has a general northeastern gradient.

Groundwater underneath the Wolco site is impacted with total petroleum hydrocarbons as gasoline, benzene, toluene, and xyelene, due to releases from the former Wolco site located on the southwest corner of Borregas Avenue and Ahwanee Avenue. The groundwater release has been documented as migrating north across Highway 101. Therefore, there is potential for groundwater impacts underneath some of the supports that are proposed for the project.

Depth to groundwater at the project sites range from five to nine feet below ground surface, and groundwater could be encountered during construction activities, including pile driving. Groundwater generated as a result of excavation dewatering, therefore, could be contaminated.

Impact Haz Mat-3: Project construction activities, including pile driving and excavating, could encounter contaminated groundwater.

Mitigation Measures Haz Mat-3: The project proposes the following measures to reduce impacts to construction workers from contaminated groundwater:

1. Develop a health and safety plan for site personnel that may encounter groundwater.

2. Properly treat groundwater generated as a result of excavation dewatering prior to discharge.

3.7.3 Conclusion

The proposed project, with the implementation of the above mitigation measures, would not result in significant hazards or hazardous material impacts. **(Less Than Significant Impact with Mitigation)**

3.8 HYDROLOGY AND WATER QUALITY

3.8.1 Setting

Drainage and Flooding

There are no waterways present on the project site. The nearest waterway is a canal that leads to Guadalupe Slough that is approximately 0.2 miles north of Borregas Avenue and SR 237 (refer to Figure 2).

The project site is not located within a 100-year floodplain.[8]

Water Quality

The water quality of streams, creeks, ponds, and other surface water bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as "non-point" source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Storm water runoff from the road is collected by storm drains and discharged into Calabazas Creek. The runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, animal feces, etc.), pesticides, litter, and heavy metals. In sufficient concentration, these pollutants have been found to adversely affect the aquatic habitats to which they drain.

Regulatory Overview

The major federal legislation governing water quality is the Clean Water Act, as amended by the Water Quality Act of 1987. The USEPA is the federal agency responsible for water quality management nationwide.

The State of California's Porter-Cologne Water Quality Control Act provides the basis for water quality regulation within California; the Act assigns primary responsibility for the protection and enhancement of water quality to the State Water Resources Control Board (SWRCB), and the nine regional water quality control boards. The SWRCB provides state-level coordination of the water quality control program by establishing state-wide policies and plans for the implementation of state and federal laws and regulations. Each Regional Water Quality Control Board (RWQCB) adopts and implements a water quality control plan ("Basin Plan") that recognizes the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The City of Sunnyvale is within the San Francisco Bay Region Water Quality Control Board.

The State Water Resources Control Board has implemented a National Pollution Discharge Elimination System (NPDES) general construction permit for the Santa Clara Valley. For properties of one (1) or more acres, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to commencement of construction.

8 Association of Bay Area Governments. Hazard Maps FEMA Flood Zones. June 2004. Available at: http://www.abag.ca.gov/bayarea/eqmaps/eqfloods/floods.html. Accessed 5 January 2006.

3.8.2 Environmental Checklist and Discussion

HYDROLOGY AND WATER QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒	☐	1,2
2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒	☐	1
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒	☐	1
4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?	☐	☐	☐	☒	☐	1
5) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒	☐	1
6) Otherwise substantially degrade water quality?	☐	☐	☒	☐	☐	1
7) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒	☐	1

HYDROLOGY AND WATER QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒	☐	1,11
9) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒	☐	1
10) Be subject to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	☐	1

Discussion:

Drainage and Flooding

The project proposes to construct two bicycle/pedestrian bridges over SR 237 and US 101. The two bridges structures would be approximately 0.2 acres in size. Because the project sites total to less than one acre in size, the proposed project is not subject to the NPDES permit.

Although the project is creating new impervious surfaces, the majority of the project site is already paved. There are, however, small areas of pervious surfaces along the freeway right-of-ways that could be paved as part of the project. The proposed project, therefore, could create a minimal increase in stormwater runoff, if any. It is not anticipated that the stormwater runoff generated by the proposed project would result in significant impacts to the existing stormwater drainage system.

Water Quality

Project construction activities may disturb underlying soils and therefore, could affect the water quality of stormwater surface runoff.

Avoidance Measures Hydro-1: The proposed project includes the following best management practices (BMPs) to reduce stormwater quality impacts:

1. Install silt fence and fiber rolls around the project sites.
2. Stabilize disturbed soil surface for dust control.
3. Install storm drain inlet protection (gravel, filter fabric, fiber rolls, etc.).

3.8.3 Conclusion

The proposed project would not result in significant hydrology or water quality impacts. **(Less Than Significant Impact)**

3.9 LAND USE

3.9.1 Setting

The existing land uses in the project area include a mix of residential, commercial, office, and industrial (refer to Figure 3). The land uses along Borregas Avenue, north of SR 237, include office and industrial uses. Office, commercial and residential uses are located along Borregas Avenue, south of SR 237 and north of US 101. Land uses along Borregas Avenue, south of US 101 include commercial and residential uses.

The project area is not part of a habitat conservation plan or natural community conservation plan.

3.9.2 Environmental Checklist and Discussion

LAND USE						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Physically divide an established community?	☐	☐	☐	☐	☒	1
2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	☐	1,2,12
3) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	☐	1,2

Discussion: The project proposes two bicycle/pedestrian bridges along Borregas Avenue over SR 237 and US 101. The proposed project would create community connectivity between north and central Sunnyvale, which are isolated by SR 237 and US 101, by creating a bicycle and pedestrian corridor linking the two areas.

3.9.3 Conclusion

The proposed project would implement the City's Bike Plan, which is incorporated into the Sunnyvale General Plan. **(Beneficial Impact)**

The proposed project would not result in land use impacts. **(No Impact)**

3.10 MINERAL RESOURCES

3.10.1 Setting

The project site is located within an urbanized area of Sunnyvale. The site is surrounded by industrial, office, commercial, and residential uses. Mineral exploration is not performed in this portion of Sunnyvale and the project site does not contain any known or designated mineral resources.

3.10.2 Environmental Checklist and Discussion

MINERAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒	☐	1
2) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	☐	1

Discussion: The project would not result in the loss of availability of a known mineral resource, and no excavation sites are present within the general project area. For these reasons, the proposed project would not result in significant impacts to mineral resources.

3.10.3 Conclusion

The proposed project would not result in a impact from the loss of availability of known mineral resources. **(No Impact)**

3.11 NOISE

3.11.1 Setting

Several factors influence sound as it is perceived by the human ear, including the actual level of sound, the period of exposure to the sound, the frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a "decibel" scale which serves as an index of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the "A-weighted" decibel or dBA. Further, sound is averaged over time and penalties are added to the average for noise that is generated during times that may be more disturbing to sensitive uses such as early morning, or late evening.

Since excessive noise levels can adversely affect human activities (such as conversation and sleeping) and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. The noise guidelines are almost always expressed using one of several noise averaging methods, such as L_{eq}, L_{dn}, or CNEL.[9] Using one of these descriptors is a way for a location's overall noise exposure to be measured, realizing of course that there are specific moments when noise levels are higher (e.g., when a jet is taking off or when a leaf blower is operating) and specific moments when noise levels are lower (e.g., during lulls in traffic flows on US 101 or in the middle of the night). For this report, the L_{dn} will be used as it is consistent with the guidelines for the City of Sunnyvale and the State of California.

The primary noise source in the project area is motor vehicles on SR 237 and US 101. Noise levels in the project area are estimated to be up to 74 L_{dn}.[10]

9 **L_{eq}** stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour. **L_{dn}** stands for Day-Night Level and is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. **CNEL** stands for Community Noise Equivalent Level; it is similar to the L_{dn} except that there is an additional five dB penalty applied to noise which occurs between 7:00 PM and 10:00 PM. As a general rule of thumb where traffic noise predominates, the CNEL and L_{dn} are typically within two dBA of the peak-hour L_{eq}.

10 Noise Sub-Element of the General Plan. 25 March 1997.

3.11.2 Environmental Checklist and Discussion

NOISE						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project result in:						
1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐	☐	1,2,6
2) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐	☐	1
3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐	1
4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐	☐	1
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐	1
6) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐	1

Discussion: CEQA does not define what noise level increase would be considered substantial. The City of Sunnyvale defines a significant noise impact from new development on existing land uses if: 1) the existing noise level on the site is normally acceptable and the proposed project would increase the existing, normally acceptable noise level by more than five dBA, but the noise level is still normally acceptable, 2) the existing noise level on the site is normally acceptable, and the proposed project would increase the noise level by more than three dBA, and the noise level now exceeds the normally acceptable levels, or 3) the existing noise level on the site exceeds normally acceptable levels, and the proposed project increases the noise level by more than three dBA (see Table 7).

Table 7
Significant Noise Impacts from New Development on Existing Land Uses

Existing L_{dn}	**Significant Noise Impact (Increase in L_{dn} from New Development)**
Normally Acceptable	More than five dBA, but noise level still in the normally acceptable category
Normally Acceptable	More than three dBA and the noise level now exceeds the normally acceptable category
Exceeds Normally Acceptable	More than three dBA

Project-Generated Noise Impacts

The project proposes to construct two bicycle/pedestrian bridges. The noise generated by bicyclists and pedestrians using the bridges would not be noticeable over the existing traffic generated noise from SR 237, US 101, and other nearby roadways. For this reason, the project-generated noise would not result in significant noise impacts.

Short-Term Construction-Related Noise Impacts

Construction of the project would result in elevated short-term construction related noise at the adjacent land uses. The noisiest construction activity will be during grading and below grade work when heavy machinery would be in use and when pile driving would occur. Typical noise levels from these activities range from 80 to 105 dBA at a distance of 50 feet.

Pile driving noise levels would vary with the distance between the pile driving and sensitive receptors, and would depend on the soils on-site. Conventional diesel-powered pile drivers, without noise mitigation, generate maximum instantaneous noise levels of 105 dBA at a distance of 50 feet from the driver. This noise level is achieved every time the hammer strikes a pile. The noise decreases at a rate of approximately six (six) dBA per every doubling of distance. The noise levels at the adjacent sensitive receptors, therefore, would vary and would be dependent on the distance from the driver.

Due to the proximity of sensitive receptors, including the residences located to the east and west of Borregas Avenue (refer to Figure 3) construction activities, including pile driving, could result in a significant temporary noise impact.

Impact Noise-1: The proposed project would result in short-term increase in noise levels in the project area, especially during grading, below grade work, and pile driving.

Mitigation Measures Noise-1: The project proposes to implement the following mitigation measures:

1. When possible pile driving will be limited to the hours of 8 am to 7pm, Monday-Friday.

2. Where practical, construction operations will be restricted to daytime hours of 7 AM to and 7 PM with no construction activities on Sundays or holidays, to avoid the more sensitive evening and early morning hours. "Practical," as used here, means daytime construction can occur without creating major disruption and nighttime construction could avoid/minimize such disruption [e.g., the closure of lane(s) of traffic on primary highways with substantial volumes of daytime traffic]. This measure applies only at locations where there are adjacent sensitive receptors.

3. Equipment will use available (i.e., standard) noise suppression devices and properly maintain mufflers. All internal combustion engines used at the project site will be equipped with the original equipment and sound suppression devices as installed by the vehicle manufacturer. In addition, all equipment will be maintained in good mechanical condition as to minimize noise created by faulty or poorly maintained engine, drive-train, and other components.

4. Staging of construction equipment and unnecessary idling of equipment within 200 feet of noise sensitive land uses will be avoided whenever feasible. "Feasible," as used here, means that the implementation of this measure would not have a notable effect on construction operations or schedule.

5. Notification shall be given to the residents within 300 feet alerting them of planned construction activities, including the overall duration of the various construction stages and the schedule of pile driving activities. The notification shall also describe the nose abatement measures that have been taken, as well as note the infeasibility of other measures that were considered but rejected.

3.11.3 Conclusion

The proposed project, with the implementation of the mitigation measures described above, would not result in significant noise impacts. **(Less Than Significant Impact with Mitigation)**

3.12 POPULATION AND HOUSING

3.12.1 Setting

According to the Association of Bay Area Governments, in 2000, the City had a population of 133,086 and a total of 52,837 households.[11]

3.12.2 Environmental Checklist and Discussion

POPULATION AND HOUSING						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒	☐	1
2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐	1
3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐	1

Discussion: The project proposes to construct two bicycle/pedestrian bridges to serve the existing need for north/south bicycle and pedestrian corridors in Sunnyvale. The project does not propose new housing or displacement of existing housing. The project would not result in growth or impacts to existing housing. For these reasons, the proposed project would not result in significant impacts to population or housing.

3.12.3 Conclusion

The proposed project would not result in significant impacts to population or housing. **(No Impact)**

11 Association of Bay Area Governments. Projections 2005. December 2004.

3.13 PUBLIC SERVICES

3.13.1 Setting

Police and Fire Service

The City's Department of Public Safety (DPS) provides police and fire services. The City participates in a mutual aid program with neighboring cities, including Mountain View, Santa Clara, and San José. Through this program, should Sunnyvale need additional assistance, one or more of the mutual aid cities would provide assistance.

Schools

The City is served by the Sunnyvale Elementary, Cupertino Union, Santa Clara Unified, and Fremont Union High school districts.

Parks

The City of Sunnyvale provides parklands, open space, and community facilities for public recreation and community services. The City has a total of 838.47 acres of open space. The nearest parks to the project sites are Orchard Gardens Park (approximately 0.1 miles northwest of Borregas Avenue and US 101) and Columbia Park (approximately 0.2 miles southeast of Borregas Avenue and US 101) (refer to Figure 2).

3.13.2 Environmental Checklist and Discussion

PUBLIC SERVICES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
Fire Protection?	☐	☐	☐	☒	☐	1
Police Protection?	☐	☐	☐	☒	☐	1
Schools?	☐	☐	☐	☒	☐	1

PUBLIC SERVICES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
Parks?	☐	☐	☐	☒	☐	1
Other Public Facilities?	☐	☐	☐	☒	☐	1

Discussion: The project proposes to construct two bicycle/pedestrian bridges to serve the existing need for north/south bicycle and pedestrian corridors in Sunnyvale. It is not anticipated that the proposed project would increase the demand for public services, including police and fire protection, or require construction or expansion of public facilities.

3.13.3 Conclusion

The proposed project would not result in impacts to public services. **(No Impact)**

3.14 RECREATION

3.14.1 Setting

The City of Sunnyvale provides parklands, open space, and community facilities for public recreation and community services. The City has a total of 838.47 acres of open space. The nearest parks to the project sites are Orchard Gardens Park (approximately 0.1 miles northwest of Borregas Avenue and US 101) and Columbia Park (approximately 0.2 miles southeast of Borregas Avenue and US 101) (refer to Figure 2). Other recreation facilities include a tennis center, skatepark, dog park, and golf courses.

3.14.2 Environmental Checklist and Discussion

RECREATION						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐	☐	1
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐	1

Discussion: The project proposes to construct two bicycle/pedestrian bridges on Borregas Avenue over SR 237 and US 101. The project would provide an alternative route to Mathilda and Fair Oaks Avenues for bicyclists and pedestrians traveling between north and central Sunnyvale. The project would serve the existing community.

The project could result in a slight increase in use of recreational facilities in the project area, including Orchard Gardens and Columbia parks, by providing more direct access to these facilities to neighborhoods that are currently isolated from these facilities by SR 237 and US 101. The project, however, is not anticipated to result in a substantial increase in use of recreational facilities or require the construction or expansion of existing or new facilities.

3.14.3 Conclusion

The proposed project would not result in significant impacts to recreational facilities. **(Less Than Significant Impact)**

3.15 TRANSPORTATION

3.15.1 Setting

Existing Roadway Network

The existing roadways in the project area are shown on Figure 2. Regional access to the project sites are provided via State Route 237 (SR 237) and Highway 101 (US 101). Local access to the project sites are provided via Borregas Avenue, Moffett Park, Persian Drive, Weddell Drive, and Ahwanee Avenue.

Existing Pedestrian and Bicycle Facilities

Existing bicycle and pedestrian connecting north and central Sunnyvale include Mathilda Avenue and Fair Oaks Avenue, both of which do not provide designated bicycle lanes (refer to Figure 2). Both Mathilda Avenue and Fair Oaks Avenue present a combination of high traffic volumes, high speeds, and side friction from driveways, parked vehicles, and intersecting roadways. These streets carry more than 43,000 vehicles per day[12] and are recommended for advanced bicyclists only.[13]

Currently, Borregas Avenue is recommended for beginner to intermediate bicyclists.[14] Borregas Avenue, however, is divided by SR 237 and US 101 and does not provide bicyclists or pedestrians with a continuous path between north and central Sunnyvale.

Sidewalks are generally provided on existing north-south roadways.

Applicable Plans and Policies

City of Sunnyvale General Plan

The City of Sunnyvale's General Plan Transportation Element has goals, policies, and actions that promote bicycle facilities and safe pedestrian movement. The Transportation Element also includes an action statement that states to develop and approve a bicycle plan.

City of Sunnyvale Bicycle Plan

The City's Bicycle Plan was completed in 1984 and consists of a set of goals, policies, and actions that provide guidance for future decision making to reflect the direction of further advances and outline specific steps that are necessary. One of the primary goals of the

12 Project Study Report, In Santa Clara County on Route US 101 at Borregas Avenue and on Route 237 at Borregas Avenue. August 2003.

13 Advanced bicyclists are defined as individuals thoroughly informed and knowledgeable of all safety rules and responsibilities of the road. Advanced bicyclists are those who are capable of riding on major roadways and in high traffic volume with very little difficulty and use the bicycle as a mode of transportation in excess of 50 miles per week.

14 City of Sunnyvale Bicycle Plan. 1984.

Bicycle Plan is to create and maintain a safe, effective system of roadways and bikeways suitable for bicycle use.

3.15.2 Environmental Checklist and Discussion

TRANSPORTATION/TRAFFIC						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio of roads, or congestion at intersections)?	☐	☐	☐	☒	☐	1
2) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒	☐	1
3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒	☐	1
4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	☐	☐	☐	☒	☐	1
5) Result in inadequate emergency access?	☐	☐	☐	☒	☐	1
6) Result in inadequate parking capacity?	☐	☐	☒	☐	☐	1,13
7) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☐	☒	1,2,12

Discussion: Currently, Borregas Avenue is a two lane street (one lane in each direction) that is divided by SR 237 and US 101 (refer to Figure 2). The project proposes two bicycle/pedestrian bridges on Borregas Avenue over SR 237 and US 101. The proposed project would provide bicyclists and pedestrians a continuous path on Borregas Avenue over SR 237 and US 101 and an alternative route to Mathilda and Fair Oaks avenues.

The proposed project includes safe landings and roadway crossings, including high visibility crosswalks and increase signs and striping, at each intersection. A three-way stop control is also proposed to be installed at the intersection of Borregas Avenue and Ahwanee Avenue. In addition, delineation and markings per 2002 Caltrans Standard Plans are proposed on the roadways for vehicles approaching the proposed bridge structures.

The proposed project would be consistent with the City's General Plan Transportation Element and Bicycle Plan goals, policies, and action statements promoting safe bicycle and pedestrian facilities.

The project would be used by bicyclists and pedestrians, and therefore, not generate vehicular traffic.

Bicycle and Pedestrian Facilities

The proposed project would improve the options available to the bicyclists and pedestrians traveling between north and central Sunnyvale. As mentioned above, the existing bicycle/pedestrian north-south corridors in the project area are Mathilda and Fair Oaks avenues, both of which do not have designated bicycle lanes and have high traffic volumes, high speeds, and side friction from driveways, parked vehicles, and intersecting roadways. These streets carry more than 43,000 vehicles per day[15] and are recommended for advanced bicyclists only.[16]

The project proposes bicycle and pedestrian bridges on Borregas Avenue that would be elevated and separated from vehicular traffic. Existing vehicular traffic on Borregas Avenue is not as intense as on Mathilda and Fair Oaks avenues. Borregas Avenue has fewer lanes and a lower speed limit. The proposed bridges on Borregas Avenue, therefore, would be a safer alternative to Mathilda and Fair Oaks avenues for bicyclists and pedestrians.

Parking

The construction of the project would result in the removal of a total of 39 on-street parking spaces on Persian Drive, Weddell Drive, and Ahwanee Avenue.

A parking study was completed for the project in January 2006. The purpose of the study was to determine the existing demand for the existing on-street parking on Persian Drive, Weddell Drive, and Ahwanee Avenue, and to identify whether there is adequate parking supply in the project vicinity to accommodate the existing demand, after construction of the proposed project. A complete copy of this study is included as Appendix D in this Initial Study.

15 Project Study Report, In Santa Clara County on Route US 101 at Borregas Avenue and on Route 237 at Borregas Avenue. August 2003.

16 Advanced bicyclists are defined as individuals thoroughly informed and knowledgeable of all safety rules and responsibilities of the road. Advanced bicyclists are those who are capable of riding on major roadways and in high traffic volume with very little difficulty and use the bicycle as a mode of transportation in excess of 50 miles per week.

Background Information and Methodology

The parking study measured weekday and weekend parking volumes for morning (between 7 AM and 9 AM), mid-day (between 1 PM and 3 PM) and evening (after 6 PM). The supply and demand for both on-street parking spaces and off-street parking spaces were counted. For each section of on-street parking that is proposed to be eliminated, peak parking demand was identified. The study then determined whether there was adequate off-street parking available on the properties adjacent to the parking removal.

The City's zoning code requires that all land uses provide adequate parking on-site. Street parking may not be counted towards parking for a particular site. The nature of the on-street parking demand in the area generally serves adjacent land uses, as there are no major parking generators or parking capacity issues in the project area.

Persian Drive

The proposed project would result in the removal of all six on-street parking spaces on Persian Drive from Plaza Drive to Borregas Avenue, adjacent to 102 Persian Drive. The peak demand for on-street parking in this area is four (4) parking spaces during the weekday after 6 PM. During this time, however, there are 11 off-street parking spaces available in the parking lot for 102 Persian Drive. There are also many off-street parking spaces available in the parking lot for the retail site adjacent to 102 Persian Drive.

The project would eliminate six off-street parking spaces, but the demand for these spaces can be accommodated by existing off-street parking available in the parking lot for 102 Persian Drive and in the parking lot for the retail site adjacent to 102 Persian Drive. Therefore, it is not anticipated that there will be a parking shortage with the construction of the proposed project.

Weddell Drive

The proposed project would result in the removal of 16 parking spaces located along Weddell Drive from approximately 150 feet west of Borregas Avenue to approximately 150 feet east of Weddell Court. This on-street parking is adjacent to the following properties: 101 W. Weddell Drive, 211 W. Weddell Drive, 907 Weddell Court, and 904 Weddell Court.

West of Borregas Avenue – A total of four (4) parking spaces west of Borregas Avenue would be removed as a part of the project. The peak parking demand for this area is four (4) parking spaces during the weekend morning. During peak demand for the off-street parking lot of 101 W. Weddell Drive, which was during the weekend after 6 PM, 15 parking spaces were available.[17]

17 The peak demand for parking, four parking spaces during the weekend morning, was compared to peak off-street parking demand during the weekend after 6 PM, instead of during the weekend morning, to be more conservative. In comparison, during the weekend morning, 22 off-street parking spaces were available.

East of Borregas Avenue – A total of 12 parking spaces east of Borregas Avenue would be removed as part of the project. The peak parking demand for this area is four (4) parking spaces during the weekday afternoon. During this time, there are 19 off-street parking spaces available in the business parking lots adjacent to the parking removal.

Based on the existing peak parking demand and the amount of available off-street parking available, it is not anticipated that a parking shortage would occur with the removal of a total of 16 parking spaces located along Weddell Drive.

Ahwanee Avenue

The project would result in the removal of 23 parking spaces along Ahwanee Avenue from Borregas Avenue to Alturas Avenue. There are a total of 23 on-street parking spaces adjacent to the property of 874 Borregas Avenue (The Sands Studio Apartments). The peak demand for this area is 17 vehicles during the weekend morning.

It was observed that the majority of those using the on-street parking were residents of The Sands Studio Apartments. There are 18 unused, off-street parking spaces for the residents during the peak use. These off-street parking spaces, however, are numbered and allotted to each unit, so it is possible that some of the on-street demand would not be able to be absorbed by the off-street parking spaces.

An expanded parking study was completed for the neighborhood south of Ahwanee Avenue in order to determine the effect of parking removal would have on the neighborhood as a whole. On- and off-street parking supply and demand were measured for the following streets:

- Alturas Avenue from Borregas Avenue to Ahwanee Avenue,
- Borregas Avenue from Ahwanee Avenue to Del Norte Avenue, and
- Hemlock Avenue from Borregas Avenue to San Diego Avenue.

The primary land use for the neighborhood south of Ahwanee is single-family residential. The off-street parking supply and demand was counted by measuring the number of driveway spaces available. To be conservative, garage spaces were not used as part of the off-street supply.

With the construction of the proposed project, which would result in the removal of on-street parking spaces along Ahwanee Avenue, vehicles normally park along Ahwanee Avenue would most likely park along Alturas Avenue and Borregas Avenue. On-street parking along Alturas Avenue is already heavily utilized. The project proposes the implementation of a residential parking permit program, which may include marking on-street parking spaces along Alturas Avenue.

On-street parking along Borregas Avenue is also high, but free parking spaces are available. During peak demand, 31 on-street parking spaces are available along Borregas Avenue. Therefore, the available parking supply on Borregas Avenue will be able to absorb the shift

in parking demand resulting from the removal of 23 parking spaces along Ahwanee Avenue. Vehicles can also park along Hemlock Avenue, which has 17 on-street parking available during peak demand.

In addition to the available on-street parking along Borregas Avenue and Hemlock Avenue during peak parking demand, 19 off-street parking spaces on Alturas Avenue, 12 off-street parking spaces on Borregas Avenue, and 17 off-street parking spaces on Hemlock Avenue are available.

For the above reasons, it is not anticipated that a parking shortage would occur with the removal of a 17 parking spaces located along Ahwanee Avenue.

3.15.3 Conclusion

The proposed project would have a beneficial impact on bicycle and pedestrian facilities in Sunnyvale. **(Beneficial Impact)**

The proposed project would not result in significant transportation impacts. **(No Impact)**

The proposed project would not result in significant parking impacts. **(Less Than Significant Impact)**

3.16 UTILITIES AND SERVICE SYSTEMS

3.16.1 Setting

Borregas Avenue is a major utility corridor. Underground utilities within the Borregas Avenue right-of-way include sanitary sewers, storm drains, gas lines, water lines, and fiber optic cable. The depth of these utilities ranges from several feet to over 30 feet below ground surface.

3.16.2 Environmental Checklist and Discussion

UTILITIES AND SERVICE SYSTEMS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒	☐	1
2) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒	☐	1
3) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒	☐	1
4) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒	☐	1
5) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒	☐	1
6) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒	☐	1

UTILITIES AND SERVICE SYSTEMS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
7) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒	☐	1

Discussion: Information on which of the existing utilities, if any, would need to be relocated to accommodate the project is unknown. Any such relocation, however, would be confined to the existing street right-of-way where previous ground disturbance has occurred. For this reason, the project would not result in significant impacts to utilities and service systems.

3.16.3 Conclusion

The proposed project would not result in significant impacts to utilities and services systems. **(No Impact)**

3.17 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
1) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒	☐	1, p. 12-69
2) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒	☐	1, p. 12-69
3) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐	☐	1, p. 12-69

Discussion: The project would not result in significant environmental impacts with the implementation of the mitigation measures included in the project and described in the specific sections of this report (refer to the specific discussions in Section 3 Environmental Setting, Checklist, and Discussion of Impacts on pages 12-69 of this Initial Study).

Checklist Information Sources

1. Professional judgment and expertise of the environmental specialist preparing this assessment, based upon a review of the project site and surrounding conditions, as well as a review of the project plans.

2. City of Sunnyvale. General Plan Executive Summary. 2003. Available at: http://sunnyvale.ca.gov/Departments/Community+Development/General+Plan/.

3. T.Y. Lin, International. Visual Impact Assessment, Borregas Avenue Pedestrian Overcrossing Over US 101 and SR 237 in the City of Sunnyvale. August 2005.

4. California Department of Conservation. Santa Clara County Important Farmland 2004. Map.

5. Bay Area Air Quality Management District. CEQA Guidelines. December 1999.

6. City of Sunnyvale. Municipal Code. Current through Ordinance 2795-05. Available at: http://qcode.us/codes/sunnyvale/.

7. Basin Research Associates, Inc. Archaeological Survey Report, Two Bicycle/Pedestrian Bridges on Borregas Avenue. August 2005.

8. County of Santa Clara. Geologic Hazard Zones. Map 11. January 2002.

9. United States Department of Agriculture, et al. Soils of Santa Clara County. June 1968.

10. Parikh Consultants, Inc. Phase I Environmental Site Assessment Borregas Avenue Pedestrian Overcrossing, Borregas Avenue and Route 237. August 2005.

    Parikh Consultants, Inc. Phase I Environmental Site Assessment Borregas Avenue Pedestrian Overcrossing, Borregas Avenue and Highway 101. August 2005.

11. Association of Bay Area Governments. Hazard Maps FEMA Flood Zones. June 2004. Available at: http://www.abag.ca.gov/bayarea/eqmaps/eqfloods/floods.html. Accessed 5 January 2006.

12. City of Sunnyvale. City of Sunnyvale Bicycle Plan. 1984.

13. City of Sunnyvale. Borregas Avenue Bicycle Bridges, Parking Study. January 2006.

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Alta Transportation Consulting and URS/Greiner Engineers. Draft Project Feasibility Study Borregas Avenue Bicycle Over-Crossings of US 101 and SR 237. 1 September 1998.

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City of Sunnyvale. Noise Sub-Element of the General Plan. 25 March 1997.

County of Santa Clara. Geologic Hazard Zones. Map 11. 26 February 2002.

County of Santa Clara. Geologic Hazard Zones. Map 11. January 2002.

Parikh Consultants, Inc. Phase I Environmental Site Assessment Borregas Avenue Pedestrian Overcrossing, Borregas Avenue and Route 237. August 2005.

Parikh Consultants, Inc. Phase I Environmental Site Assessment Borregas Avenue Pedestrian Overcrossing, Borregas Avenue and Highway 101. August 2005.

T.Y. Lin, International. Visual Impact Assessment, Borregas Avenue Pedestrian Overcrossing Over US 101 and SR 237 in the City of Sunnyvale. August 2005.

T.Y. Lin, International. Project Study Report, In Santa Clara County on Route US 101 at Borregas Avenue and on Route 237 at Borregas Avenue. August 2003.

United States Department of Agriculture, et al. Soils of Santa Clara County. June 1968.

US Environmental Protection Agency. Lead in Paint, Dust, and Soil. Last updated: 30 December 2005. Accessed: 17 January 2006. Available at: http://www.epa.gov/lead/pubs/leadinfor.htm.

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